

## Abstract

### Method for recognizing the path of a tip of a body on a medium

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An angle sensor (3) enables the angle of orientation ( $\theta$ ) of a body to be determined. A force sensor (4) measures the reaction force of the tip of the body in contact with the medium in almost continuous manner. The orientation of the reaction force with respect to the medium plane is  
 10 determined from measurement data (S1, S2) from said sensors (3 and 4). A vector ( $\hat{o}$ ) tangential to the path is determined by projection (F4) of the reaction force in the medium plane. The path can be determined by mathematical integration (F5) of the tangential vector ( $\hat{o}$ ) or by double  
 15 mathematical integration of the tangential acceleration which can be determined for example by the scalar product of a tangential unitary vector obtained by normalization of the tangential vector ( $\hat{o}$ ) and of data representative of the acceleration supplied by an accelerometer.

(Figure 2)